

Flumethrin (1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 04.04.2023 6.1 30.09.2023 4019094-00016 Date of first issue: 25.02.2019

Section 1: Identification

Product name : Flumethrin (1%) Formulation

Manufacturer or supplier's details

Company : MSD

Address : 33 Whakatiki Street - Private Bag 908

Upper Hutt - New Zealand

Telephone : 0800 800 543

Emergency telephone number : 0800 764 766 (0800 POISON) 0800 243 622 (0800

CHEMCALL)

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

Section 2: Hazard identification

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Acute toxicity (Dermal) : Category 3

Skin corrosion/irritation : Category 2

Serious eye damage/eye irri-

tation

Category 2

Reproductive toxicity : Category 1

Specific target organ toxicity -

single exposure (Oral)

Category 2

Specific target organ toxicity - :

repeated exposure

Category 2 (Auditory system)

Specific target organ toxicity - :

repeated exposure (Oral)

Category 2

Aspiration hazard : Category 1



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Hazardous to the aquatic environment - chronic hazard

Category 3

GHS label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H311 Toxic in contact with skin. H315 Causes skin irritation.

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child. H371 May cause damage to organs if swallowed.

H373 May cause damage to organs through prolonged or re-

peated exposure if swallowed.

H373 May cause damage to organs (Auditory system) through

prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe mist or vapours.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302 + P352 + P312 IF ON SKIN: Wash with plenty of water.

Call a POISON CENTER/ doctor if you feel unwell.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediate-

ly all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.



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P308 + P311 IF exposed or concerned: Call a POISON

CENTER/ doctor.

P331 Do NOT induce vomiting.

P332 + P313 If skin irritation occurs: Get medical advice/ atten-

tion.

P337 + P313 If eye irritation persists: Get medical advice/ at-

tention.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards which do not result in classification

Vapours may form explosive mixture with air.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Paraffin oil	8012-95-1	>= 50 -< 70
Xylene	1330-20-7	>= 10 -< 20
Flumethrin	69770-45-2	>= 1 -< 2.5
Toluene	108-88-3	>= 0.25 -< 1

Section 4: First-aid measures

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed, DO NOT induce vomiting.

If vomiting occurs have person lean forward.



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Call a physician or poison control centre immediately.

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

delayed

Harmful if swallowed.

May be fatal if swallowed and enters airways.

Toxic in contact with skin. Causes skin irritation. Causes serious eye irritation.

May damage fertility or the unborn child. May cause damage to organs if swallowed.

May cause damage to organs through prolonged or repeated

exposure.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

Section 5: Fire-fighting measures

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

,

Specific hazards during fire-

fighting

Do not use a solid water stream as it may scatter and spread

fire.

Flash back possible over considerable distance. Vapours may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod- :

ucts

Carbon oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Hazchem Code : 3W

Section 6: Accidental release measures

Personal precautions, protec: : tive equipment and emer-

gency procedures

Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.



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Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used. Soak up with inert absorbent material.

Suppress (knock down) gases/vapours/mists with a water

spray jet.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

Section 7: Handling and storage

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

Use explosion-proof electrical, ventilating and lighting equip-

ment.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe mist or vapours.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Non-sparking tools should be used. Keep container tightly closed.

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product.

Take care to prevent spills, waste and minimize release to the

environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working

place.

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

The effective operation of a facility should include review of



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> engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures. industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

Conditions for safe storage Keep in properly labelled containers.

> Store locked up. Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Keep away from heat and sources of ignition.

Materials to avoid Do not store with the following product types:

Self-reactive substances and mixtures

Organic peroxides Oxidizing agents Flammable gases Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Poisonous gases **Explosives**

Section 8: Exposure controls/personal protection

Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parame- ters / Permissible			
		exposure)	concentration			
Paraffin oil	8012-95-1	WES-TWA	5 mg/m3	NZ OEL		
		(Mist)	10 / 0	NZOEL		
		WES-STEL (Mist)	10 mg/m3	NZ OEL		
		TWA (Inhal-	5 mg/m3	ACGIH		
		able particu-				
		late matter)				
Xylene	1330-20-7	WES-TWA	50 ppm	NZ OEL		
			217 mg/m3			
	Further inforn	Further information: Ototoxin				
		TWA	20 ppm	ACGIH		
Flumethrin	69770-45-2	TWA	45 μg/m3 (OEB 3)	Internal		
	Further inforn	Further information: Skin				
		Wipe limit	450 μg/100 cm ² Internal			
Toluene	108-88-3	WES-TWA	20 ppm 75 mg/m3	NZ OEL		
	Further inforn	Further information: Ototoxin, Exposure can also be estimated by biological monitoring, Skin absorption				
	biological mo					
		WES-STEL	100 ppm	NZ OEL		
			377 mg/m3			
	Further inforn	Further information: Ototoxin, Exposure can also be estimated b				
		biological monitoring, Skin absorption				
		TWA	20 ppm	ACGIH		



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Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentration	Basis
Xylene	1330-20-7	Methylhip- puric acid	Urine	End of shift	1.5 g/l	NZ BEI
		Methylhip- puric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI
Toluene	108-88-3	Toluene	Urine	End of exposure or end of shift	0.03 mg/l	NZ BEI
		o-Cresol	Urine	End of exposure or end of shift	0.3 mg/g creatinine	NZ BEI
		Toluene	In blood	Prior to last shift of work-week	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g creatinine	ACGIH BEI

Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).

Minimize open handling.



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Use explosion-proof electrical, ventilating and lighting equip-

ment.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type

Hand protection

Combined particulates and organic vapour type

Material : Chemical-resistant gloves

Remarks : Consider double gloving. Take note that the product is flam-

mable, which may impact the selection of hand protection.

Eye protection : Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

Skin and body protection : Work uniform or laboratory coat.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, dis-

posable suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

Section 9: Physical and chemical properties

Appearance : Aqueous solution

Colour : light brown, yellow

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling :

range

No data available

Flash point : 54 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available



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Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.820 - 0.900 g/cm³

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle size : Not applicable

Section 10: Stability and reactivity

Reactivity : Not classified as a reactivity hazard. Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Flammable liquid and vapour.

Vapours may form explosive mixture with air.

Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents Hazardous decomposition : No hazardous de

products

: No hazardous decomposition products are known.



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Section 11: Toxicological information

Exposure routes : Inhalation

Skin contact Ingestion Eye contact

Acute toxicity

Harmful if swallowed. Toxic in contact with skin.

Product:

Acute oral toxicity : Acute toxicity estimate: 374.47 mg/kg

Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 393.03 mg/kg

Method: Calculation method

Components:

Paraffin oil:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

Xylene:

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg

Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute inhalation toxicity : LC50 (Rat): 27.571 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg

Method: Expert judgement

Remarks: Based on national or regional regulation.

Flumethrin:

Acute oral toxicity : LD50 (Rat): > 20 mg/kg

LD50 (Mouse): > 20 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2,934 mg/l

Acute dermal toxicity : LD50 (Rat): > 5 mg/kg

Toluene:



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Acute oral toxicity : Acute toxicity estimate: 500 mg/kg

Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute inhalation toxicity : Acute toxicity estimate: 11 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Components:

Paraffin oil:

Species : Rabbit

Result : No skin irritation

Xylene:

Species : Rabbit Result : Skin irritation

Flumethrin:

Result : No skin irritation

Toluene:

Species : Rabbit

Method : Directive 67/548/EEC, Annex V, B.4.

Result : Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Paraffin oil:

Species : Rabbit

Result : No eye irritation

Xylene:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Flumethrin:

Result : Mild eye irritation



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Toluene:

Result : Irritation to eyes, reversing within 21 days Remarks : Based on national or regional regulation.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Xylene:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact
Species : Mouse
Result : negative

Toluene:

Test Type : Maximisation Test Exposure routes : Skin contact Species : Guinea pig

Method : Directive 67/548/EEC, Annex V, B.6.

Result : negative

Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

Components:

Xylene:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Species: Mouse



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Application Route: Skin contact

Result: negative

Flumethrin:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)

Test system: Salmonella typhimurium

Result: equivocal

Test Type: Chromosomal aberration
Test system: Chinese hamster ovary cells

Result: positive

Remarks: Not classified due to inconclusive data.

Test Type: Chromosomal aberration Test system: Human lymphocytes

Result: negative

Test Type: in vitro micronucleus test

Test system: Mouse Result: negative

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

Toluene:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Rat

Application Route: Intraperitoneal injection

Result: negative

Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Species: Mouse

Application Route: inhalation (vapour) Method: OECD Test Guideline 478

Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Xylene:

Species : Rat Application Route : Ingestion



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Exposure time : 103 weeks Result : negative

Flumethrin:

Species : Rat
Application Route : Oral
Exposure time : 2 Years

NOAEL : 0.5 mg/kg body weight

Result : negative

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

Toluene:

Species : Rat

Application Route : inhalation (vapour)

Exposure time : 103 weeks Result : negative

Species: MouseApplication Route: Skin contactExposure time: 24 MonthsResult: negative

Reproductive toxicity

May damage fertility or the unborn child.

Components:

Xylene:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on sexual function and

fertility, and/or on development, based on animal experiments.

Remarks: Based on national or regional regulation.

Flumethrin:

Effects on foetal develop-

ment

: Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: NOAEL: 0.36 mg/kg body weight Result: Maternal toxicity observed., Reduced offspring weight



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gain, foetal abnormalities

Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: NOAEL: 0.5 mg/kg body weight Result: Maternal toxicity observed., Skeletal malformations,

Reduced foetal weight

Test Type: Development

Species: Rabbit Application Route: Oral

Developmental Toxicity: NOAEL: 1.7 mg/kg body weight

Result: No teratogenic potential

Reproductive toxicity - As-

sessment

May damage the unborn child.

Toluene:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: inhalation (vapour) Method: OECD Test Guideline 416

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (vapour)

Result: positive

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on development, based on

animal experiments.

STOT - single exposure

May cause damage to organs if swallowed.

Components:

Xylene:

Assessment : May cause respiratory irritation.

Flumethrin:

Exposure routes : Oral

Assessment : Causes damage to organs.

Toluene:

Assessment : May cause drowsiness or dizziness.



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STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure if swallowed. May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Components:

Xylene:

Exposure routes : inhalation (vapour)
Target Organs : Auditory system

Assessment : Shown to produce significant health effects in animals at con-

centrations of >0.2 to 1 mg/l/6h/d.

Flumethrin:

Exposure routes : Oral

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Toluene:

Exposure routes : Inhalation

Target Organs : Central nervous system

Assessment : May cause damage to organs through prolonged or repeated

exposure.

Repeated dose toxicity

Components:

Paraffin oil:

Species : Rat, female LOAEL : 161 mg/kg Application Route : Ingestion Exposure time : 90 Days

Xylene:

Species : Rat

LOAEL : > 0.2 - 1 mg/l
Application Route : inhalation (vapour)

Exposure time : 13 Weeks

Remarks : Based on data from similar materials

Species : Rat
LOAEL : 150 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Flumethrin:

Species : Rat
NOAEL : 0.7 mg/kg
Application Route : Oral



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Exposure time : 13 Weeks

Target Organs : digestive system, Skin

Symptoms : decrease in appetite, Skin disorders

Species : Dog

NOAEL : 0.88 mg/kg
Application Route : Oral
Exposure time : 13 Weeks

Target Organs : digestive system, Hair, Skin

Symptoms : decrease in appetite, Skin disorders

Toluene:

Species : Rat LOAEL : 1.875 mg/l

Application Route : inhalation (vapour)

Exposure time : 6 Months

Species : Rat

NOAEL : 625 mg/kg
Application Route : Ingestion
Exposure time : 13 Weeks

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Paraffin oil:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Xylene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Toluene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure

Components:

Toluene:

Inhalation : Target Organs: Central nervous system

Symptoms: Neurological disorders



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Section 12: Ecological information

Ecotoxicity

Components:

Paraffin oil:

Toxicity to fish : LL50 (Scophthalmus maximus (turbot)): > 100 mg/l

Exposure time: 96 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EL50 (Acartia tonsa (Calanoid copepod)): > 100 mg/l

Exposure time: 48 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EL50 (Skeletonema costatum (marine diatom)): > 100 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

NOELR (Skeletonema costatum (marine diatom)): > 1 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

Xylene:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EC50 (Skeletonema costatum (marine diatom)): 10 mg/l

Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Danio rerio (zebra fish)): > 0.1 - < 1 mg/l

Exposure time: 35 d

Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

EL10 (Daphnia magna (Water flea)): > 1 - 10 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Toxicity to microorganisms NOEC: > 100 mg/l

Exposure time: 3 h



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Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Flumethrin:

Toxicity to fish (Chronic tox-

icity)

NOEC (Danio rerio (zebra fish)): 0.046 mg/l

Exposure time: 144 h

M-Factor (Chronic aquatic

toxicity)

1

Toluene:

Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Ceriodaphnia dubia (water flea)): 3.78 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

NOEC (Skeletonema costatum (marine diatom)): 10 mg/l

Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus kisutch (coho salmon)): 1.39 mg/l

Exposure time: 40 d

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (water flea)): 0.74 mg/l

Exposure time: 7 d

Toxicity to microorganisms : EC50 (Nitrosomonas sp.): 84 mg/l

Exposure time: 24 h

Persistence and degradability

Components:

Xylene:

Biodegradability : Result: Readily biodegradable.

Biodegradation: > 70 % Exposure time: 28 d

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

Toluene:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 80 % Exposure time: 20 d

Bioaccumulative potential

Components:

Paraffin oil:



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Partition coefficient: n- : log Pow: > 4

octanol/water Remarks: Calculation

Xylene:

Partition coefficient: n- : log Pow: 3.16

octanol/water Remarks: Calculation

Flumethrin:

Partition coefficient: n-

octanol/water

log Pow: 6.2

Toluene:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)

Bioconcentration factor (BCF): 90

Partition coefficient: n-

octanol/water

log Pow: 2.73

Mobility in soil

No data available

Other adverse effects

No data available

Section 13: Disposal considerations

Disposal methods

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

Section 14: Transport information

International Regulations

UNRTDG

UN number : UN 1992

Proper shipping name : FLAMMABLE LIQUID, TOXIC, N.O.S.

(Xylene, Flumethrin)

Class : 3
Subsidiary risk : 6.1
Packing group : III
Labels : 3 (6.1)
Environmentally hazardous : no



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IATA-DGR

UN/ID No. : UN 1992

Proper shipping name : Flammable liquid, toxic, n.o.s.

(Xylene, Flumethrin)

Class : 3 Subsidiary risk : 6.1 Packing group : III

Labels : Flammable Liquids, Toxic

Packing instruction (cargo : 366

aircraft)

Packing instruction (passen: 355

ger aircraft)

IMDG-Code

UN number : UN 1992

Proper shipping name : FLAMMABLE LIQUID, TOXIC, N.O.S.

(Xylene, Flumethrin)

Class : 3
Subsidiary risk : 6.1
Packing group : III
Labels : 3 (6.1)
EmS Code : F-E, S-D
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

NZS 5433

UN number : UN 1992

Proper shipping name : FLAMMABLE LIQUID, TOXIC, N.O.S.

(Xylene, Flumethrin)

Class : 3
Subsidiary risk : 6.1
Packing group : III
Labels : 3 (6.1)
Hazchem Code : 3W
Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

Section 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

HSNO Approval Number

HSR100759 Veterinary Medicines Non dispersive Open System Application Group Standard



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HSW Controls

Certified handler certificate not required.

Tracking hazardous substance not required.

Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

The components of this product are reported in the following inventories:

AICS : not determined

DSL : not determined

IECSC : not determined

Section 16: Other information

Revision Date : 30.09.2023

Further information

Sources of key data used to

compile the Safety Data

Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
NZ BEI : New Zealand. Biological Exposure Indices

NZ OEL : New Zealand. Workplace Exposure Standards for Atmospher-

ic Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NZ OEL / WES-TWA : Workplace Exposure Standard - Time Weighted average NZ OEL / WES-STEL : Workplace Exposure Standard - Short-Term Exposure Limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships;



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n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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